ABSTRACTS

P-072 Changes of Competitive Performance, Training Load and Tethered Force During Tapering in Young Swimmers

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INTRODUCTION: Training load changes during a taper may have an impact on performance and can be estimated using a session-RPE method. Moreover, since tethered swimming force is related to performance, changes in training load and tethered force may explain performance changes. The aim of the study was to examine the relationship between tethered force and session-RPE load changes before and during a taper.

METHODS: During the four-week period before the National Championship (NC), the session-RPE training load of 12 swimmers (age: 14.2±1.3yrs) was recorded daily and summarised for each week. Thirty-four (T1), twenty (T2) and six days (T3) before the NC the swimmers’ tethered swimming force (TF) during a 15 s maximum effort test, the hand-grip strength (HG) and percentage of body fat (BF) were evaluated. Backward multiple linear regression analysis was used to examine the relationship of NC performance change with session-RPE training load, TF, HG and BF changes between T3-T1 and T3-T2. RESULTS: Performance was not changed after the taper (0.11±1.6%, 95%CI: -0.9 to 1.1%, p=0.05). The session-RPE load difference of week 4 minus week 1 (W4-W1) was related with the percentage change of performance during the taper (r=0.63, p<0.05). HG, TF and BF were not changed during the T1, T2, T3 and their percentage changes were not related to the percentage change of performance (TF: 0.11±6.3, 19.1±5.9, 19.5±5.9%, p=0.05). The variation in percentage change of performance was attributed by 40% to changes in session-RPE (W4-W1, multiple r=0.63, r2=0.40, SEEm=1.37%, p<0.05).

HG, F and BF changes did not contribute significantly to the model.

DISCUSSION: Session-RPE estimated training load is a useful parameter affecting changes of performance time. This method of training load calculation may help coaches for a better planning of training before an important competition.


P-071 Tracking the 2004-2008 Olympic Cycle Performance in Long Distance Freestyle Events

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INTRODUCTION: As world records are being broken so often, tracking the swimmer’s performance is important to analyze its progression over time and help coaches to define realistic goals and training methods. The aim of this study was to track the long distance freestyle events performance during the 2004-2008 Olympic Cycle.

METHODS: For the 400-m and 1500-m, an overall of 181 swimmers and 905 race times were analyzed. FINA’s male top-150 ranking for freestyle events performance during the 2004-2008 Olympic Cycle. Stability and prediction based on overall performance and self-corrected values were moderate (400-m event (K = 0.43 ± 0.05) and 1500-m event (K = 0.44 ± 0.05)). Self-correlations revealed that high stability is achieved at the third season in the 1500-m event (r = 0.61) and at the fourth season in the 400-m event (r = 0.73).

DISCUSSION: World-ranked swimmers performance went through a great improvement during the 2004-2008 Olympic Cycle. Stability and prediction based on overall Olympic Cycle period is moderate. When more strict time frames are used, swimming performance stability and prediction increases, starting at the third season in the 1500-m and at the fourth season in the 400-m.


P-087 Tracking the 2004-2008 Olympic Cycle Performance

J.A.1; Barbosa, T.M.1

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METHODS: For the 400-m and 1500-m, an overall of 181 swimmers and 905 race times were analyzed. FINA’s male top-150 ranking for long course in the 2007-2008 season was consulted in each freestyle event to identify the swimmers included in it. Best performances during the Olympic cycle seasons (between 2003-2004 and 2007-2008) were also collected from a public swimming database (www.swimrankings.net). Performance progression was analyzed based on two approaches: (i) mean stability; (ii) normative stability. For mean stability assessment, descriptive statistics and ANOVA repeated measures followed by a post-hoc test were computed. Normative stability was analyzed with Pearson Correlation (Malina, 2001) and the Cohen’s Kappa tracking index (Landis and Koch, 1977). RESULTS: ANOVA repeated measures revealed significant variations in the swimming performance for the 400-m event [F (1,91) = 67.89, P < 0.01] and 1500-m event [F (1,90) = 91.81, P < 0.01] throughout the Olympic Cycle. Bonferroni post-hoc tests confirmed significant performance enhancement (P < 0.01). The K values expressing the stability throughout the Olympic Cy-